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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/546,725	08/25/2009	Kazuo Nishi	12732-0224002	3914

26171 7590 05/01/2017

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EXAMINER
TRAN, TONY

ART UNIT	PAPER NUMBER
2894	

NOTIFICATION DATE	DELIVERY MODE
05/01/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KAZUO NISHI, YU YAMAZAKI, TOMOYUKI IWABUCHI, and KEISUKE MIYAGAWA

Appeal 2016-003286
Application 12/546,725[1]
Technology Center 2800

Before ROMULO H. DELMENDO, CHRISTOPHER C. KENNEDY, and JEFFREY R. SNAY, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal under 35 U.S.C. § 134(a) from the Primary Examiner's final decision to reject claims 1–24.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

BACKGROUND

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[1] The Applicants (hereinafter "Appellants") state that the real party in interest is "Semiconductor Energy Laboratory Co., Ltd." (Appeal Brief filed on July 31, 2015, hereinafter "Appeal Br.," 1).

[2] Appeal Br. 4–7; Reply Brief filed on February 4, 2016, hereinafter "Reply Br.," 1–4; Final Office Action (notice emailed on January 26, 2015), hereinafter "Final Act.," 2–12; Examiner's Answer (notice emailed on December 4, 2015), hereinafter "Ans.," 2–5.

The subject matter on appeal relates to a photodetector, which may be incorporated into a portable communication tool (e.g., a portable telephone), for the purpose of adjusting the visibility of the tool's display (Specification, hereinafter "Spec.," 1, ll. 10–14; 2, ll. 14–18; and 3, ll. 16–21). Figure 1 of the application is illustrative of the invention and is reproduced below:

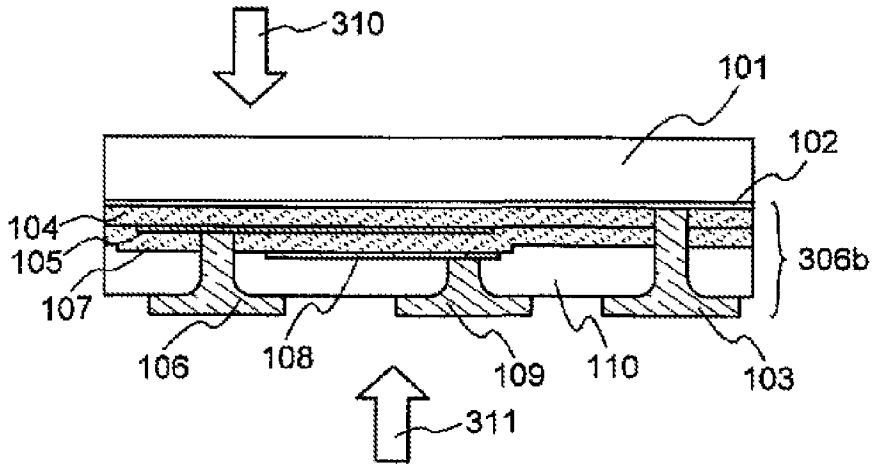

Figure 1 above shows a photodetector including: a substrate 101; a first transparent electrode 102; a wiring 103 connected to the first transparent electrode; a first semiconductor film 104; a metal electrode (negative polarity) 105; a wiring 106 connected to the metal electrode 105; a second semiconductor film 107; a second transparent electrode (negative polarity) 108; a wiring 109 connected to the second transparent electrode 108; and organic resin 110 (Spec. 17, l. 15–18, l. 6). According to the Appellants, elements 102, 103, 104, 105, and 106 constitute a first detector element, which detects the brightness of light 310 irradiated on a first display portion, and elements 102, 103, 107, 108, and 109 constitute a second detector element, which detects the brightness of light 311 irradiated on a second display portion (*id.*; 18, l. 23–19, l. 2). Specifically, the Appellants explain that "the metal electrode 105 has a function for shutting off the light" and

"[t]herefore, light (intensity of illumination) irradiated [on] one display portion only is detected" (*id.* at 19, ll. 2–4).

Representative claim 1 is reproduced from page 8 of the Appeal Brief (Claims Appendix), with key disputed limitations highlighted in italicized text and bracketed drawing reference numerals added, as follows:

> 1. A photodetector comprising:
> a substrate [101];
> a first electrode [105] over the substrate [101];
> a first semiconductor film [107] over the first electrode [105];
> a second electrode [108] over the first semiconductor film [107];
> an insulating film [110] over the second electrode [108], the insulating film comprising an organic resin;
> a first wiring [106] over the insulating film [110], wherein the first wiring [106] is in direct contact with the first electrode [105]; and
> a second wiring [109] over and in direct contact with a top surface of the insulating film [110], wherein the second wiring [109] is in direct contact with the second electrode [108],
> *wherein the first electrode* [105] *is capable of shielding light, so that the photodetector does not detect light passing through the first electrode* [105].

The other independent claims on appeal (i.e., claims 2–4) recite similar subject matter.

REJECTION ON APPEAL

On appeal, the Examiner maintained a rejection under pre-AIA 35 U.S.C. § 103(a) of claims 1–24 as unpatentable over Forrest et al.[3]

[3] US 7,151,217 B2, issued on December 19, 2006.

(hereinafter "Forrest") in view of Kuroda et al.[4] (hereinafter "Kuroda") (Ans. 2–5; Final Act. 2–12).

DISCUSSION

A dispositive issue in this appeal is whether the Examiner's finding that Forrest describes the disputed limitation highlighted above in representative claim 1 constituted reversible error.[5] Specifically, the Examiner's position is based on the finding that Forrest's element 702*a* (Fig. 7) or element 802*a* (Fig. 8A) describes the disputed limitation (Final Act. 3; Ans. 3). For the reasons stated in the Appeal Brief and below, we agree with the Appellants that the Examiner's finding is not supported.

Forrest discloses a photosensitive optoelectronic device having at least two *transparent* electrodes and one or more organic photoconductive layers disposed between the *transparent* electrodes (Abstract; col. 10, ll. 23–24). According to Forrest, these devices containing *transparent* electrodes may be used as a solar cell, a photodetector, or a photocell (col. 10, ll. 44–46). Contrary to the Examiner's finding, neither element 702*a* nor element 802*a* is disclosed or suggested as a material "capable of shielding light, so that the photodetector does not detect light passing through the first electrode" as required by claim 1. Rather, Forrest teaches plainly that these electrodes are either transparent or semi-transparent (col. 21, ll. 42–43; col. 22, l. 9–col. 23, l. 44).

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[4] US 6,351,369 B1, issued on February 26, 2002.
[5] Compare the Examiner's findings in the Final Office Action (Final Act. 3) with the Appellants' argument in the Appeal Brief (Appeal Br. 4–5).

In response to the Appellants' argument, the Examiner states—without citing to any description in Forrest—that Forrest's Figures 7 and 8A show devices that detect light from the top down but not from the bottom up through the substrate 701 or 801 (Ans. 3). Even if we assume that the Examiner's statement is factually correct, it fails to establish that Forrest describes the capability of the first electrode to shield light, as required by claim 1.[6]

For these reasons, we cannot sustain the Examiner's rejection.

SUMMARY

The Examiner's final decision to reject claims 1–24 is reversed.

REVERSED

[6] The Examiner's findings concerning the other independent claims are flawed for the same or similar reasons.